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## A NEW GENUS OF BATFLIES FROM GUATEMALA (Diptera Acalypterae: Streblidae)

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In the course of the Field Museum-Leon Mandel Expedition to Guatemala (1933-34), a remarkable new batfly—the largest species of streblid yet known—was collected by the late Franklin J. W. Schmidt. It is of interest that such a striking species should have remained undescribed for so long; it was collected from one of the commonest of the neotropical bats, *Myotis nigricans nigricans* Wied. It is possible, of course, that *M. nigricans* is not the preferred host, and that the fly wandered to it from another host in a common resting place. Such transfer apparently is of rather common occurrence among batflies, as it is among other ectoparasitic arthropods.

This new batfly superficially resembles some of the species of the genus *Aspidoptera*, but, for reasons outlined below, we erect a new genus for its reception. We take pleasure in dedicating this genus to Mr. B. Jobling, of the Wellcome Bureau of Scientific Research (London, England), whose morphological and taxonomic investigations on the Streblidae and other blood-sucking Diptera have set a high standard in the study of these groups.

Acknowledgment is made to Peggy Collings Brown, formerly Staff Illustrator of the Department of Zoology, for her careful execution of the illustrations.

### *Joblingia* gen. nov.

Genotype *Joblingia schmidti* sp. nov.

*Diagnosis*.—Head very similar in type to that of the *major-corynorhini-hirsutulul* section of the genus *Trichobius*; funnel-



FIG. 25. *Joblingia schmidti* gen. et sp. nov.: a, dorsal view; b, right wing, showing chaetotaxy.

shaped when viewed from above, much narrower than the anterior part of the thorax; dorsal surface not divided into well-defined subregions. Eyes faceted, not projecting beyond the lateral margins of the head. Palps horizontal, foliaceous, free. Theca pyriform. Margins of postgenae with slender setae.

Thorax strongly convex, in lateral profile much higher than long. Mesonotum much narrower than the sternopleura. Pleural region

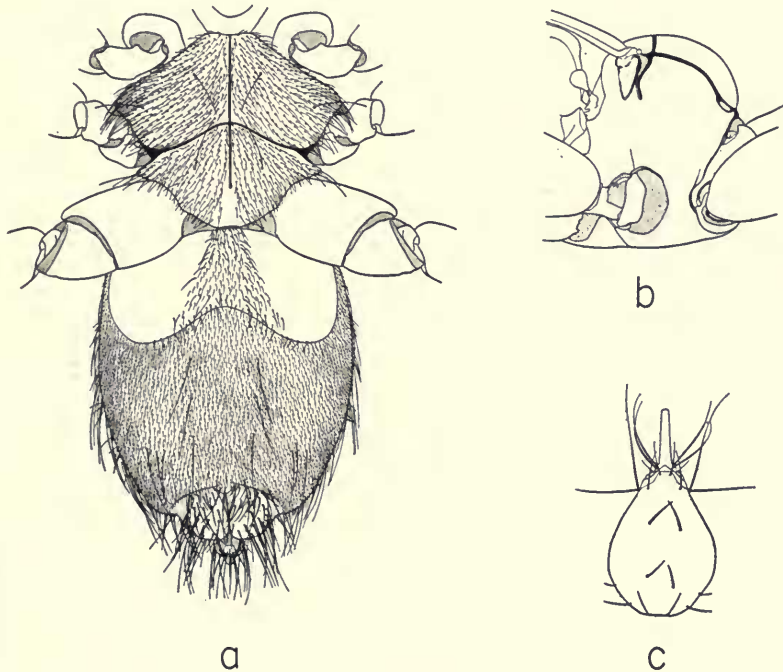


FIG. 26. *Joblingia schmidti* gen. et sp. nov.: a, under side of thorax and abdomen, chaetotaxy of legs omitted; b, lateral view of thorax, chaetotaxy omitted; c, labium.

convex, the mesopleura prominent from above. Humeral calluses feebly convex, not at all prominent. Anterior margin of prescutum emarginate at middle for the reception of the head when elevated. Median suture bifurcate at anterior margin of prescutum, the arms extending laterally along the edge of the emargination; posteriorly, the median suture extends to the scutellum. Scutellum with four macrochaetae. Meso-postnotum not produced posteriorly, its posterior margin broadly and feebly arcuate. Mesopleura united dorsally with the prescutum, the line of fusion marked by a pig-

mented longitudinal suture; mesopleura separated from the pteropleura by the membranous mesopleural suture; meso-, ptero-, and metapleura united ventrally, with only a slight indication of a pigmented suture that extends dorsally from the mesocoxal cavity. Sternopleura much broader than long, pleurotrochantines broader than long.

Wings reduced to oval pads. All legs stout and long, of about equal size; femora with long, strong setae on dorsal surface and apically on sides; sides and ventral surface of femora with very short, fine setae. Tibiae with dense, fine setae that are longer and less recumbent on the outer side than on the inner; no long, erect setae intermingled.

Abdomen of female sacciform (male unknown); membranous portion clothed with dense, very long, strong setae above and with extremely fine, short, dense setae below; apex with a terminal cone and two ventral, oval sclerotized plates.

*Remarks.*—The reduced wings and general structure of the thorax in *Joblingia* recall the situation found in some of the species of the genus *Aspidoptera* (*phyllostomatis*, *clovisi*, *minuta*); however, we feel that the similarity of thoracic structure is the result of a convergent development correlated with an independent reduction of wings and that *Joblingia* is actually more closely related to the generalized *Trichobius* species, as indicated by head structure. In all of the species of *Aspidoptera*, the head is at least somewhat flattened and divided into distinct, plate-like, sclerotized subregions and fits rather closely to the thorax; the palps have a tendency toward a vertical position (approaching the generalized Streblinae); the theca is broad; and the legs are relatively short.

The Streblidae seem to be actively speciating and undergoing numerous adaptations to their parasitic mode of life. As a result, the genera are sometimes difficult to define. For example, within the genus *Trichobius*, the head structure and the co-adaptation of the head and thorax range from the generalized type of the *major-corynorhini-hirsutulus* section to the specialized development of *perspicillatus*; in *perspicillatus* this structure approaches the condition found in the generalized Streblinae.

***Joblingia schmidti* sp. nov.** Figures 25–27.

*Type* from Chocoyos, Chimaltenango, Guatemala. Female. Collected February 6, 1934, by F. J. W. Schmidt. Host: *Myotis nigricans nigricans* Wied.

*Description.*—For the greater part of their extent, the latero-vertices are separated from the somewhat elevated occipital region only by a vague, non-membranous, transverse groove, which intergrades, on each side, into a membranous strip that is a dorsal continuation of the membranous area that separates the latero-vertex from the gena; along the midline, the latero-vertices are



FIG. 27. *Joblingia schmidti* gen. et sp. nov. Dorsal view of head and thorax, showing chaetotaxy.

separated from each other (as are the occipital subregions to a lesser extent) by a non-membranous longitudinal groove. Eyes eight- or nine-faceted, the facets indistinct. Genae and postgenae with dense, rather long setae. Theca as in figure 26, c.

Transverse mesonotal suture broadly interrupted at middle, not united with the median suture. Prescutum anteriorly with long, rather uniform setae (those of the antero-medial area shorter) that become longer posteriorly and on the scutum. Wings with six



longitudinal veins; crossveins apparently variable in number and position, not identical in both wings of the type.

Long setae of dorsum of abdomen shorter laterally and anteriorly, absent in a longitudinal area along the median line on apical two-thirds; short setae of ventral surface of abdomen very fine and nearly transparent. First sternite small, well sclerotized, concealed in the membranous fold between the thorax and the second sternite; second sternite concave on each side of the median setose area to accommodate the hind coxae. Ventral plates at apex of abdomen feebly sclerotized.

*Measurements.*—Length of body (head included) 5 mm.; length of wings 1.2 mm.; length of hind legs (femur and tibia) 4.1 mm.

*Remarks.*—The setae are of a rather light honey-yellow color, with the exception of the long, dorsal, abdominal setae, which have a reddish tinge; the short, ventral, abdominal setae are so fine and transparent as to be almost invisible for the greater part of their length, except under unusually favorable lighting.

This species is named in honor of the collector, Franklin J. W. Schmidt, who obtained many interesting ectoparasites of mammals on the Guatemala expedition.